

## Theme 3: Partnerships with Indigenous Peoples and Local Communities

The GEF has been playing a unique role in addressing global environmental problems through innovative and effective actions on the ground. Some of these actions have been effectively implemented by partnering with indigenous peoples and local communities.

Indigenous peoples play a crucial role as stewards of natural resources. Local actions to address local and global environmental concerns have empowered indigenous peoples and local communities to test and demonstrate strategies and interventions, while improving local livelihoods and ensuring community ownership.

Indigenous peoples' traditional knowledge and ecosystem management practices have been highly relevant for environmental conservation, sustainable development and climate adaptation. *Principles and Guidelines for Engagement with Indigenous Peoples*<sup>1</sup> have been formulated in close consultation with indigenous peoples to ensure that the GEF and its partner Agencies make appropriate efforts to include and promote indigenous peoples in processes and projects.

The engagement of indigenous peoples and local communities are an integral part of most full sized projects (FSPs) and medium sized projects (MSPs), through partnerships and active participation. Empowering communities is the core principle of the GEF Small Grants Programme (SGP), which provides support to civil society organizations (CSOs), community-based organizations (CBOs) and indigenous peoples' organizations in their community-level strategies.

In GEF-6, the network of implementing partners, including CSOs, CBOs and indigenous peoples, is expected to be strengthened and expanded towards delivering higher impacts in an effective and efficient manner for the GEF as a whole. The Policy Recommendations for GEF-6 are based on six key areas. One of these areas is *Strengthening Country and Civil Society Engagement*. Acknowledging the positive and critical roles played by CSOs, including indigenous peoples, efforts will continue to be made to ensure the effective implementation of the *Principles and Guidelines for Engagement with Indigenous Peoples* in the work of the GEF.

There are numerous and diverse partnerships created by and with indigenous peoples through GEF projects. Some of these alliances were originated at the community level while others at the international level.

The following projects provide a glimpse of the range of partnerships fostered with indigenous peoples and local communities through FSPs and MSPs, and the impacts achieved through the SGP.

---

<sup>1</sup> GEF (2011): <http://www.thegef.org/gef/pubs/principles-and-guidelines-engagement-indigenous-peoples>

<b>Integrated Ecosystem Management in Indigenous Communities</b>	
Countries	Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama (Regional)
Focal Area	Biodiversity
Project type	FSP
Allocation	\$9,000,000 (GEF), \$2,500,000 (cofinancing)
GEF Agency	Inter-American Development Bank (IADB) and World Bank
Executing partner	Central American Indigenous and Peasant Coordination Association for Community Agroforestry
Type of partner	Regional community-based organization
Approval	December, 2004
Status	Completed (Implemented: 2005-2010)

### **Project Overview**

Indigenous peoples account for 24 percent of the population in Central America. About 80 percent of the area where these indigenous populations live is covered by forest and approximately 23 percent overlaps with established protected areas. Ambitious land reforms and land redistribution programs in most of the countries in the region threatened communal systems of indigenous peoples and their cultural values sustaining land use. With the purpose of achieving effective biodiversity conservation, the Central American Indigenous and Peasant Coordination Association for Community Agroforestry (ACICAFOC) implemented this project, to strengthen the capacity of indigenous communities to protect and manage their natural and cultural resources, and to recuperate and promote their cultural values and sustainable traditional land use practices. The project built on the initiatives of indigenous communities that inhabit areas of high biodiversity in six priority areas within the Mesoamerican Biological Corridor, by:

1. Strengthening and developing cultural and institutional capacity and empowerment of indigenous communities. Activities focused on strengthening indigenous communities' organizational, technical and administrative capacities to articulate their cultural values and then apply them to natural resource management; systematizing standards and criteria for traditional ecosystem management; and strengthening indigenous organizations' capacities in traditional ecosystem management.
2. Promoting sustainable cultural land use and traditional ecosystem management, through the development of community conservation and sustainable cultural land use plans. Two types of plans were targeted: Community Plans for Territorial Management, which focused on managing local ecosystems using traditional knowledge; and Integral Community Development Plans, which utilized western techniques such as mapping and biodiversity inventories.
3. Developing culturally appropriate products, markets and services for environmental sustainability in the participating indigenous communities. Through training and grant support, action were focused on promoting culturally appropriate and environmentally sustainable income-generating activities to provide long-term benefits to the communities while creating an incentive for conservation.

4. Training and capacity building on participatory project monitoring and evaluation, to support the measurement and systematization of progress in conservation and sustainable use of biodiversity and impacts achieved, at the local and regional level.

## Partnerships

The projects was developed and designed based on a long participatory process involving the indigenous organizations at the regional and national level and government officials in the seven Central American countries. Consultations, workshops and social assessments were carried out to identify and adequately address the needs of the indigenous communities in project design and implementation. This highly participatory process at the regional, national (in seven countries) and community level was the basis for ACICAFOC to establish the following partnerships:

- **Indigenous Organizations.** More than 350 indigenous and rural communities were engaged in the conservation and sustainable use of natural resources, and over 4,000 indigenous peoples and 357 organizations in capacity development activities. Based on their strengthened capacity, 23 conservation and land use plans were developed which resulted in 162,810 hectares under community conservation and 207,487 hectares under sustainable cultural land use. Income-generating initiatives involving timber processing, coffee, cocoa, community ecotourism, and handicrafts were successfully implemented, resulting in, for example, a network for marketing traditional products (cacao) by establishing agroforestry systems with 386 communities; an environmental services trading networks with 107 communities; and an ecotourism network with 32 communities. Indigenous communities engaged included Mopan, Maya, Mam, K'iche, Kaqchikel, Ixil, Itza, Achi, Garifuna, Xinca, Uspanteko Tz'utujil, Tektiteko, Poqoman, Poqomchi', Q'eqchi', Sakapulteko in the Maya area (Belize-Guatemala); Lenca, Pipil Cacaopera in the Dry Pacific area (El Salvador, Honduras); Cabécar Naso, Teribe Terraba Ngöbes, Buglem Bribri, Boruca in the Talamanca Bocas area (Panama, Costa Rica); Miskitos, Sumo, Garifuna Rama, Pech in the Sumo-Miskitia area (Honduras, Nicaragua); Emberá Wounaan, Kuna de Madungandi, Kuna de Wargandi, Kuna Yala in the DarienKuna area (Panama); and Garifuna Isleño, Tolupan in the Humid Atlantic area (Honduras).
- **Regional Indigenous Organizations.** The Central American Indigenous Council (CICA) closely coordinated activities with ACICAFOC, establishing a common coordination group (“*Wayib*” in Mayan terminology). The *Wayib* not only provided overall guidance, but training and capacity development to the indigenous communities in the participating countries, using a range of innovative methods including traditional trainings, experiential exchanges and study tours. Assistance was also provided to the participating communities to identify and implement income-generating initiatives. Exchange of experiences about community production, community mapping, cultural use of land and sustainable uses, preparation of management plans and ecotourism were promoted among the communities and the regional level.
- **Government Agencies.** The Central American Commission on Environment and Development (CCAD), composed of the Environment Ministers in the seven countries in the region, was involved in the activities, also providing cofinancing. Through this engagement, the CCAD strengthened its decision-making capacity towards a regional common agenda on biodiversity conservation.

<b>Regional System of Protected Areas for Sustainable Conservation and Use of Valdivian Temperate Rainforest</b>	
Country	Chile
Focal Area	Biodiversity
Project type	FSP
Allocation	\$ 5,041,000 (GEF), 15,611,800 (cofinancing)
GEF Agency	UNDP
Executing partner	National Environment Commission (CONAMA)
Type of partner	Government agency
Approval	August, 2007
Status	Under implementation

### **Project Overview**

Chile's twelve regions became semi-autonomous political and administrative units as a result of the decentralization process undertaken by the national government. As a result, biodiversity conservation and protected areas management is increasingly becoming a regional responsibility. Certain barriers, however, were limiting advances in protected areas management and systemic approaches in the regions, hindering its contribution to the national conservation biodiversity targets. These barriers included policy, institutional and operational as well as and deficiencies in ecosystem representativeness. To address these barriers, the National Environment Commission (CONAMA) is implementing this project to set up the first Regional Protected Area System in Chile to support national and regional development goals and conserve its biodiversity endowment –the Valdivian Temperate Rainforest Eco-region. An effective, multi-stakeholder, multi-use Regional Protected Areas System is being created in the Los Lagos Region, by:

1. Developing regional protected area structures, including appropriate and sustainable policy, financing and institutions. Activities include the design and approval of the Regional Protected Areas System, and the development of its institutional and governance structures, and its funding mechanisms. Learning, adaptation, and evaluation systems will also be created to promote replication in other regions in the national PA system.
2. Creating sustainable and replicable models of NGO stewardship of protected areas. Through these activities, the range of stakeholder groups which take part of the regional conservation strategy will be increased while also providing governance and financial mechanisms that can be expanded in the long term to other NGO and private reserves.
3. Establishing sustainable and replicable models of collaborative buffer zone management. Different approaches to buffer zone management are being tested in public and private protected areas.
4. Establishing sustainable and replicable models of private and indigenous managed resource protected areas. Two types of sustainable uses categories are being tested: a) with different private landowners in a fragmented landscape; and b) with indigenous landowners in a forest landscape.

5. Developing the capacity of institutions and individuals involved in the Regional Protected Area System to function effectively. Training programs for protected area managers and staff, as well as for national and regional government staff are being coordinated to increase their knowledge and skills for effective protected areas management. These programs are complemented with an awareness program for all stakeholders who benefit from and participate in the regional system

### Partnerships

A multi-stakeholder consultation and participation process, including workshops, inter-institutional consultations, meetings, visits, interviews, and other methods were utilized to fully engage the diverse range of relevant public and private partners throughout the Los Lagos region. This extensive consultative process, coordinated by CONAMA, led to the following partnerships:

- **Government Agencies.** Representatives from various agencies at all levels are participating to create and support the Regional Protected Areas System. The active engagement from the national, regional and local levels ensures ownership and long-term sustainability of the regional system. Key partners include the National Forestry Service (CONAF), the Institute for Agricultural Development (INDAP), the National Tourism Service (SERNATUR), the Regional Government of the Los Lagos region, the Regional Ministerial Secretary of Education (SEREMI Education), and the Municipalities of Corral, La Unión, Valdivia, Lanco, Los Lagos, Lanco, San Juan de la Costa, Puerto Varas, Cochamó and Puerto Montt.
- **Indigenous Peoples.** The Indigenous Community Trafunco-Los Bados is piloting the first Indigenous-owned Managed Use Protected Area, providing a model for enabling indigenous groups to create conservation set-asides and sustainable use areas within the RPAS. Indigenous groups are also direct participants in conservation and sustainable traditional indigenous practices, as well as directly engaged in the improvement of traditional productive practices associated with non-wood forest products. Alternative livelihoods that take into account the values and traditions of local indigenous peoples are also being developed. Key partners include the Indigenous Leaders Council of Osorno, Council of Indigenous Headmen of Butahuillimapu, Cacicazgo of Cunico, the Indigenous Communities Trafunco Los Bados, Melillanca Manque, Antillanca and Entity Pedro Antillanca, the San Juan Women's Association of Foliage Producers and the Network of Indigenous Protected Areas of Mapu Lahual.
- **Civil Society Organizations.** The World Wildlife Fund (WWF) and The Nature Conservancy (TNC) are creating and co-funding a private protected area financing fund, providing support and strengthening the management of key priority sites through capacity building and exchanges of experiences for replication. Also, actions with local stakeholders and landowners, and education activities are being implemented in collaboration with national and local CSOs, including Parks for Chile (PPCh), the Senda Darwin Foundation and Surambiente, and community-based organizations in Chaihuín, Huiro, Huape, Los Liles, San Juan, Catrillelfu, Cadillal, La Aguada, Mashue, Llanacura, Cumeulelfu and Santa Elisa.
- **Academic and Research Institutions.** Through collaboration with the Austral University of Chile and the Los Lagos University, a scientific knowledge base on biodiversity and natural resources in the project priority areas is being generated.
- **Private sector.** Various private enterprises and associations are actively participating in demonstration sites and pilot experiences within the RSPA and its buffer zones, including landowners, non-timber product producers, tourism, fisheries, among others. Some of these partners include the Rio Cruces Forestry Company, the Tornagaleones Forestry Company, the Lahuén Rural Tourism Committee, Sur Marino (a private tourism concession holder in the Alerce Andino National Park), Brisas del Mar Rural Tourism Committee, the National Wood

Industries Corporation, the Association of Landowners of Chiloe, the Protected Areas Landowner Association of Valdivia and the Network of Non-timber Producers.

<b>Distilling Essential Oils from Medicinal and Aromatic Plants Collected by Indigenous Community Forest Users in Dolakha</b>	
Country	Nepal
Focal Area	Biodiversity
Project type	SGP
Allocation	\$33,378 (GEF SGP); \$51,484 (cofinancing)
Executing partner	Deudhunga Multipurpose Cooperative Ltd.
Type of partner	Community-based cooperative
Status	Completed (April 2005 – March 2006)

### **Project Overview**

The Dolakha mountainous district in central Nepal is an area rich in diversity, including its surrounding forests which provide firewood, timber, and indigenous plants used for food and medicines. Indigenous groups living in the area, such as the Tamang, Sherpa, Thami, Newar, Gurung and Dalits, depend on these forests for their livelihoods. These groups have extensive traditional knowledge about the uses of local medicinal and aromatic plants (MAPs). These MAPs were used to produce essential oils from wintergreen, Juniper leaf, juniper berry, artemesia, abies, anthopogan and calamus. Earlier Mild steel distillation units were used for essential oil extraction, which didn't have a boiler attached, thus resulting in a very energy extensive practice. Some of the essential oils produced in these units were prone to corrosive action. In addition, many community forest user groups in the Dolakha district were commercially harvesting non-timber forest products, increasing their vulnerability of these indigenous communities. To promote the sustainable harvesting of MAPs, the Deudhunga Multipurpose Cooperative Ltd. implemented this project to build capacity and develop sustainable livelihoods among local and indigenous communities, by:

1. Installing improved and more efficient stainless steel distillation units in three clusters in the Dolakha district. These units, which include a boiling system, require about 40 percent less firewood to distill almost double the amount of MAPs to produce, for example, 3.5 kg of wintergreen oil in 11 hours. This represents not only a more efficient production, but a more profitable one for communities, since the less efficient system used produced 1.5 kg of wintergreen oil in 12 hours. In addition, the stainless steel efficient units allowed for some plant residue, which is dried after oil extraction, to be used as fuelwood for the boiler, thus reducing the need for firewood from the forest.
2. Training of community forest user groups towards sustainable harvesting of MAPs. The comprehensive activities included the development of forest management plans, the promotion of sustainable harvesting approaches, and capacity development on forest certification by the Forest Stewardship Council, organic certification and the maintenance of records. Training on essential oil processing technology was also coordinated, providing indigenous groups the skills to run the distillation units independently.

## Impacts

About 600 kilograms of raw plant materials are currently processed per day in the efficient distillation units, producing 2-2.5 liters of essential oils. Participating indigenous communities are extracting the essential oils from wintergreen, Juniper leaf, juniper berry, artemesia, abies, anthopogan and calamus, which are sustainably harvested. Additionally, indigenous forest user groups have been empowered by their engagement with the Deudhunga Multipurpose Cooperative Ltd. to organize themselves as entrepreneurial entities. Particular impacts include:

- **Environmental Impacts.** The efficient equipment installed has enhanced production while saving greenhouse gas emissions since it requires little to no firewood. Community forest user groups supplying raw materials to the distillation units now follow a systematic and sustainable harvesting method that ensures regeneration of MAPs. For the first time in Nepal, the Forest Stewardship Council issued a group certification to a Federation of Community Forest Users covering 11 community forests of 3,581.2 ha; and 18 Community Forest of 6,853 ha, where 44 non timber forest products and 17 essential oil extracting plants are sustainably harvested, have been protected as well as organically certified.
- **Socio-economic Impacts.** The essential oils produced are being sold in the international market, providing direct employment and alternative opportunities to over 450 people in Dolakha. DMC and the community forest user groups involved in this project own shares of the enterprise, with 40 and 30 percent respectively. Also, part of the income from selling the essential oils goes to low income user groups, significantly improving livelihoods and increasing the economic transaction at local level.
- **Policy Impacts.** The project influenced the Ministry of Forest and Soil Conservation which reduced the government tax of wintergreen leaves by 75 percent.

**Sustainability.** The sustainability of the project continues to be enhanced by key partnerships established with private sector companies for the marketing and trading of essential oils, including the Himalayan Bio Trade Ltd., Chaudhary Biosys Nepal Pvt. Ltd., Male International Pvt. Ltd. and Herbs Production and Processing Co. Ltd. Also, the Deudhunga Multipurpose Cooperative is a member of the Sustainable Bio Trade Group which was awarded the Chain of Custody certification from the Forest Stewardship Council. Assistance obtaining certifications was also provided by the Asia Network for Sustainable Agriculture and Bio-resources, USAID, Aveda, and the Rainforest Alliance.

**Replication.** Stainless steel distillation units have been installed at 12 locations in 7 districts and technical support provided in 18 districts in Nepal to replicate the same model for a wintergreen processing enterprise in the Sindhupalchok and Okhaldhunga districts.

<b>Documentation of Medicinal Plants Used by Indigenous and Traditional Groups in the Cerrado Area and Development of Plant-Based Cosmetic Products</b>	
Country	Brazil
Focal Area	Biodiversity
Project type	SGP
Allocation	Three projects of \$50,000; \$50,000 and \$27,570 (GEF SGP); with cofinancing of \$87,756; \$218,509; and \$56,098 respectively.
Executing partner	Pacari Network
Type of partner	Network of community-based organizations
Status	Completed (November 2005 – June 2009)

### **Project Overview**

The Cerrado in Brazil is a multi-ecosystem woody savannah that makes up more than 20 percent of the country or about 2 million square kilometers. This unique ecosystem has been considered as the richest savanna in the world. However, it is currently being cleared at the rate of 14,000 square kilometers per year (twice the rate of the Amazon region) with 47% of the area already deforested. Because of its biodiversity and high deforestation rate, it is counted as one of 25 ‘global hotspots’. The Cerrado harbors approximately 10,000 species of native plants, which have strategic importance for the health, income and cultural identity of traditional groups and indigenous peoples who live in the Cerrado. These communities and indigenous groups of the Cerrado are losing their traditional plants, land, food sources and cultures due to the increasing land clearing, agribusinesses (such as sugar cane produced for ethanol), soybean plantations and eucalyptus farms, hydro-electric dams, timber and mining in the region. The Pacari Network, an organization involving over 80 community groups in the states of Minas Gerais, Goiás, Tocantins and Maranhão, was committed to preserve traditional knowledge and medicine. About 90% of the members are women, many of whom are holders of traditional medicinal knowledge passed down from generation to generation. Pacari Network communities use more than 388 species of medicinal plants, 40 percent of which are native to the Cerrado. To preserve the use of these medicinal plants while promoting their conservation, a series of complementary and sequential activities were implemented by the Pacari Network:

1. Capacity development focused on the production of medicinal products and provision of health care from the sustainable collection of locally available biodiversity in Minas Gerais. Activities also included direct work with 16 communities on conservation, and sustainable use and management of medicinal plants, and public policy discussions on medicinal plants, traditional knowledge and conservation of the Cerrado. Cosmetics made of medicinal plants were also piloted as part of these efforts.
2. Capacity development and knowledge-sharing among communities. This project focused on helping communities involved to register and obtain recognition for the profession of healers, as well as intellectual property of their traditional knowledge. Debates were also held related to conservation of the Cerrado and traditional medicine. A book *Farmacopéia Popular do Cerrado* was also published, documenting the traditional uses of medicinal plants in the Cerrado to protect traditional knowledge and plants, prevent biopiracy, and gain recognition for the practices of traditional healers. The book was produced with cofinancing from the Ministry of Environment and Instituto Sociedade, População e Natureza.



3. Extraction of plant oils from native Cerrado plants for use in the preparation of cosmetics and raw materials for phytotherapeutical products. The project is under the responsibility of the Associação dos Ipês, one of the groups associated with the Pacari Network, which is responsible for production and commercialization of phytocosmetics. The group brings together 11 women that work on the collection and processing of native medicinal plants and on the preparation of the phytocosmetics made of gueroba palm oil. The initiative has mobilized 43 small farmers in the region near Buriti de Goiás to collect the palm fruits. Part of this effort included support for the official registry of Pacari's phytocosmetics brand, the acquisition of equipments for gueroba's oil extraction and the experiments to develop many new products, like the gueroba oil's soap, gueroba and buriti oil body lotion; gueroba's oil, sesame seed oil body lotion, among others.

### Impacts

Closely working with its over 80 community groups members, the Pacari Network achieved the following impacts through the implementation of these sequential activities:

- **Environmental Impacts.** These initiatives have changed the savannah community by sensitizing farmers and gatherers on sustainable management of medicinal plants, thus enhancing the biodiversity in the region. For example, the Association of Ipês in Serra Dourada, in Goiás state, one of the most important biodiversity sites, is training community groups and farmers on best management practices for sustainable use of biodiversity in the biome to ensure continuity of collection of medicinal plants, herbs and oil palms in the Serra Dourada. The book *Farmacopéia Popular do Cerrado* helped to save traditional knowledge from extinction. In addition, the projects provided sustainable economic alternatives to deforestation and resource extraction, also increasing local community access to traditionally conserved areas of the Cerrado and its biodiversity through the elaboration and implementation of simple management plans of these areas inside private properties.
- **Socio-Economic Impacts.** The combined efforts implemented positively impacted over 200 community members who participated in the training courses on management practices and use of medicinal plants in Tocantins, Minas Gerais and Maranhao, also providing them with alternative income generation activities for more than 300 families. Training provided on the production of soaps, oils and body lotions produced from gueroba oil has become a source of jobs and income for traditional communities. Mobilization and training of traditional healers ensured the documentation of their traditional knowledge, which was used for the provision and improvement of health care services for 16,000 families.
- **Policy Impacts.** As a result of the projects, there has been an increase in public policy discussions about medicinal plants, traditional knowledge, and conservation in the Cerrado. The Pacari Network has become a board member of the National Medicinal Plants and Herbs Committee as a way to earn political recognition of traditional medicine in Brazil and has also submitted to the National Institute of Historical and Artistic Heritage of the Ministry of Culture an application for registration of healers and their intellectual property as part of the country's cultural heritage. Registration of the profession of healers and the intellectual property of their traditional knowledge will further add value to these practices and entrench them into the national policy.

**Replication and Upscaling.** Other communities are taking part in the project activities, expanding the network of knowledge throughout the region. In addition, cosmetics production activities are constantly attracting new participants. An important next step is to establish this enterprise as a link in the chain of fair trade. The Pacari Network is now participating in the National Commission on Sustainable Development of Traditional Peoples and Communities, and

participates in discussions on traditional knowledge within the Common Access to Genetic Resources and Benefit Sharing Commission.

<b>Producing Soaps from Jatropha Seed Oil</b>	
Country	Tanzania
Focal Area	Climate Change
Project type	SGP
Allocation	\$21,267 (GEF SGP), \$13,968 (cofinancing)
Executing partner	Kampuni ya Kusambaza Teknolojia (KAKUTE Ltd.)
Type of partner	Technology development company
Status	Completed (Implemented: September 2004 - December 2006)

### **Project Overview**

The Monduli district is an arid area of northeastern Tanzania is sparsely populated, mostly by the semi-nomadic Maasai, whose culture is based around cattle herding. These Maasai pastoralist tribes have used the *Jatropha curcas* tree for years as a living fence to protect cattle herds. In 2000, the US McKnight Foundation began working with the Heifer Project International in Tanzania. The objective was to explore possibilities for using *Jatropha* seeds to enhance local incomes in the Monduli district through the production of raw materials and soaps for cosmetic products, while also exploring the use of plant-based oil as a substitute for diesel fuel. Heifer contracted with Kampuni ya Kusambaza Teknolojia (KAKUTE), a technology development company in Arusha whose primary goal is to reduce poverty for disadvantaged farmers' groups and women's groups in rural areas through the creation of business opportunities. In a semi-arid area where crop production is poor, income generating activities with drought-resistant *Jatropha* allows for sustainable livelihoods, particularly for women. To complement these efforts, KAKUTE implemented this project to reduce poverty through the production of *Jatropha* seeds for income generation and promotion of rural bio-enterprises, by:

1. Offering seeds and seedlings to women's groups (then recouping investments when the women sold seeds back to the company after harvest).
2. Working with women to collect seeds from hedges and fences and establish tree nurseries.
3. Providing business opportunities for Maasai women to generate income from *Jatropha* through the sale of seeds, the sale of oil pressed from the seeds, the sale of *Jatropha* 'cake' left over after pressing oil from the seeds for use as animal feed and the production and sale of soaps.
4. Developing a *Jatropha* supply chain in Tanzania.
5. Developing and disseminating *Jatropha* processing technologies. (*Jatropha* soap is made by mixing *Jatropha* oil with caustic soda solution in a cold process).
6. Training women to use the seeds that they grow to produce soaps as well as fuel oil for lamps to earn income and to use at home.
7. The provision of gender training organized by the SGP and facilitated by Tanzania's Department of Community Development to address the gender imbalance in Maasai society.

## 8. Exploring urban and foreign markets for goods produced in rural areas of Tanzania.

### Impacts

To provide sustainable livelihoods and empowerment to farmers' groups and women's groups in rural areas, KAKUTE established a partnership with the Tanzania Traditional Energy Development and Environment Organization (TaTEDO) to implement this project, achieving the following impacts:

- **Environmental Impacts.** The project helped in the collection of seeds from existing hedges and fences and the establishment of tree nurseries. The cultivation of *Jatropha* helps to control land degradation as it can grow on dry areas where other tree species cannot and prevents soil erosion caused by storm water or wind. Furthermore, since *Jatropha* seeds are crushed to make oil and that oil is used for lighting and as bio-diesel for running diesel-machines; maize mills and electricity generation; *Jatropha* cultivation and its bi-products help reduce emissions through the use of renewable energy and reduction of tree cutting. In particular, through the project, woodfuel was reduced by 60 percent since the community started using 40.5 tons of *Jatropha* seedcake for biogas to improve energy use within the area and to naturally fertilize crops. KAKUTE's establishment of urban and foreign markets for goods produced in rural areas not only provided new sources of income, but also reduced migration to urban areas and helped protect the environment in rural Tanzania by encouraging alternative fuels and promoting organic products.
- **Socio-economic Impacts.** During the project period, the participants produced 5,125 liters of oil worth \$10,250 and 3.5 tons of soap worth \$20,533. Current soap production amounts to 18 tons per year. The project succeeded in introducing completely new entrepreneurial skills to Maasai women who did not have previous employment activities. The new skills that they have acquired include commercial management of a *Jatropha* nursery, bulk sales of seeds, oil processing, soap-making and marketing of biodiversity products. Income from the sale of *Jatropha* seeds and employment from rural enterprises has improved the lives of women in Monduli district. Household incomes have gone up to more than 100 percent. The income is used for food, improved shelter and clothing. The expanded household income has allowed increased investment in equipment to enhance quality and quantity of biodiversity products processed at family and cottage industry levels. During the project period, over 1,530 people were trained in *Jatropha* husbandry, 90 percent of which were women. All of these people are now self-employed growing seeds and cuttings for sale. In addition, *Jatropha* soap is anti-bacterial and hypo-allergenic, which boosts its economic value. The commercialization of *Jatropha* herbal soap started in Arusha in 2007. The factory now produces around 2 tons of different shape and size soap a year, generating around over \$18,000. The factory has set a goal to produce 18 tons of *Jatropha* healthcare products to generate about \$110,000. The enterprise is now employing 55 seed collectors, 20 oil processors and 8 soap makers.
- **Policy Impacts.** Development started in 1999 with several women groups in Engaruka village, Arusha, Tanzania, then spread to Arumeru district before it grew into a national programme. For this purpose, KAKUTE organized a national workshop on *Jatropha* with the view to scaling up the initiative technology to the national level and influencing policy. KAKUTE has partnered with numerous organizations and government agencies include the McKnight Foundation, the TaTEDO, the Centre for Agricultural Mechanization and Rural Technologies, the Tanzania Engineering and Manufacturing Design Organization, the Tanzania Industrial Research and Development Organization, the Selian Agricultural Research Institute, the University of Dar es Salaam, and the Tanzania Bureau of Standards. This has entrenched the project in government programming.

**Sustainability.** KAKUTE's multi-level partnerships established through this project support its sustainability. Moreover, the formation of a separate private enterprise – Jatropha Products Tanzania Limited—to coordinate commercial activities, production and quality control also supports sustainability and efficiency.

**Replication and Upscaling.** KAKUTE has shared its successful model with other community-based organizations, research institutions and on-going programmes through knowledge exchange visits and workshops. Jatropha soap is now sold in Dar es Salaam, Mwanza, Moshi and other major towns in Tanzania, and is beginning to be exported to the United States.

**Awards:** In 2007, KAKUTE received a royal family award from the University of Harvard.